

# M A T E R I A L   S A F E T Y   D A T A   S H E E T

QUICK REFERENCE:

**BWT-280**



**H - O - H Water Technology, Inc.**  
**500 South Vermont Street**  
**Palatine, Illinois 60067**

**EMERGENCY PHONE No's**

847-358-7400 (H - O - H BUSINESS Hrs.)  
 800-424-9300 (CHEMTREC - 24 Hrs.)

**H M I S:**

4 = EXTREME  
 3 = SEVERE  
 2 = MODERATE  
 1 = SLIGHT  
 0 = INSIGNIFICANT

HEALTH	3
FLAMMABILITY	0
REACTIVITY	1

**DOT:**

HAZARD LABELING



IN FIBER KEGS

PRODUCT IDENTIFICATION	PRODUCT NAME	CHEMICAL FAMILY	DATE	Rev. No.	SUPERSEDES	EPA - TPQ	BY
	<b>BWT-280</b>	BOILER WATER TREATMENT	1-1-11	10	7-5-08	NA	

HAZARDOUS COMPONENTS	CHEMICAL NAME	COMMON NAME	CAS No.	PERCENT	OSHA PEL	ACGIH-TLV	OTHER
	SODIUM HYDROXIDE	LYE, CAUSTIC SODA	1310-73-2	80	2 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>	OSHA Cel. 2 mg / m <sup>3</sup>

COMMENT	1. NEVER ADD WATER TO THIS PRODUCT. IN MAKING DILUTIONS ALWAYS ADD PRODUCT SLOWLY TO WATER WITH VIGOROUS MIXING OR AGITATION. 2. THE PERMISSIBLE FEDERAL EXPOSURE STANDARD FOR PURE SODIUM HYDROXIDE IN AIR IS 2 mg/m <sup>3</sup> . NO CRITERIA HAS BEEN SET FOR WATER. 3. GRANULES OF THIS PRODUCT TEND TO STICK TO PROTECTIVE CLOTHING AND GLOVES. WHEN REMOVING SUCH PROTECTIVE EQUIPMENT, BE CAREFUL NOT TO COME INTO CONTACT WITH RESIDUAL PRODUCT. ALWAYS WASH PROTECTIVE EQUIPMENT THOROUGHLY AFTER EACH USE. 4. THIS PRODUCT CONTAINS SODIUM SULFITE (20%). DO NOT ALLOW THIS PRODUCT TO COME IN CONTACT WITH ACIDS. THE REACTION OF SODIUM SULFITE WITH ACID PRODUCES HAZARDOUS SULFUR DIOXIDE GAS. 5. THE D.O.T. SHIPPING DESCRIPTION FOR BWT-280 IS "CORROSIVE SOLID, N.O.S. (CONTAINS SODIUM HYDROXIDE), 8, UN1759, PG II".
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PHYSICAL DATA	BOILING POINT (Degrees Fahrenheit)	NA	SOLUBILITY (in water)	SOLUBLE	EVAPORATION RATE (water = 1.0)	NA
	VAPOR PRESSURE (in millimeters of Mercury)	NA	SPECIFIC GRAVITY (water = 1.0)	NA	pH (1% solution)	12.8
	VAPOR DENSITY (air = 1.0)	NA	PERCENT (%) VOLATILE (by volume)	NA		
	APPEARANCE and ODOR	WHITE POWDER WITH SLIGHT ORGANIC ODOR.				

FIRE AND EXPLOSION	FLASH POINT (Degrees Fahrenheit)	METHOD	FLAMMABLE LIMITS	LOWER EXPLOSIVE LIMIT	UPPER EXPLOSIVE LIMIT
	NONE	NA		NOT APPLICABLE	NOT APPLICABLE
	EXTINGUISHING MEDIA	SPECIAL FIRE FIGHTING PROCEDURES		UNUSUAL FIRE AND EXPLOSION HAZARDS	
	<b>WATER</b>  THIS PRODUCT WILL NOT BURN OR DIRECTLY PROMOTE FIRE.	<b>PROTECT OR REMOVE FIBRE KEGS</b>  THIS PRODUCT IS PACKAGED IN FIBRE KEGS THAT MAY BE DAMAGED IN A FIRE. IF THIS PRODUCT IS RELEASED FROM A DAMAGED SHIPPING CONTAINER, REACTIONS MAY OCCUR WITH METALS, CERTAIN BUILDING MATERIALS, OR VARIOUS STORED MATERIALS. SODIUM HYDROXIDE REACTS STRONGLY WITH ALUMINUM PRODUCING FLAMMABLE HYDROGEN GAS. DO NOT ALLOW DRY SPILLED MATERIAL TO CONTACT ANY OTHER CHEMICAL.		<b>SECONDARY REACTIONS</b>  UNDER NORMAL CONDITIONS THIS PRODUCT WILL NOT SUPPORT COMBUSTION OR ACCELERATE A FIRE. IF CONTACT WITH BUILDING MATERIALS, OTHER CHEMICALS, OR LIVE ELECTRICAL SERVICES OCCURS DURING A FIRE, UNPREDICTABLE HEAT, HAZARDOUS GASES (SUCH AS SULFUR DIOXIDE), OR ELECTRICAL ARCS MAY BE PRODUCED.	

REACTIVITY DATA	STABILITY	CONDITIONS TO AVOID	NONE KNOWN
	STABLE <input checked="" type="checkbox"/> UNSTABLE <input type="checkbox"/>		
	INCOMPATIBILITY (Materials to Avoid)	METALS (SUCH AS ALUMINUM, TIN, AND ZINC), ACIDS, BROMINE AND CHLORINE RELEASE AGENTS, OXIDIZERS.	
	HAZARDOUS DECOMPOSITION PRODUCTS	SULFUR DIOXIDE	
	HAZARDOUS POLYMERIZATION MAY WILL OCCUR <input type="checkbox"/> WON'T OCCUR <input checked="" type="checkbox"/>	CONDITIONS TO AVOID	NONE KNOWN

SPECIAL PRECAUTIONS	STORAGE AND HANDLING	OTHER
	1. PROTECT CONTAINERS AGAINST PHYSICAL DAMAGE. 2. STORE IN A COOL, DARK, WELL-VENTILATED LOCATION AWAY FROM DIRECT SUNLIGHT AND OTHER SOURCES OF RADIANT HEAT. 3. KEEP CONTAINERS TIGHTLY CLOSED WHEN NOT IN USE. <b>NEVER</b> MOVE AN OPEN OR LOOSELY CLOSED CONTAINER. 4. WEAR HAND AND FOOT PROTECTION WHEN MOVING HEAVY CONTAINERS. 5. STORE AT 60° F. OR HIGHER.	1. NOT TO BE TAKEN INTERNALLY. 2. NOT TO BE USED FOR OTHER THAN SPECIFIED PURPOSE. 3. KEEP AWAY FROM CHILDREN. 4. <b>NEVER</b> MIX THIS MATERIAL WITH ANY OTHER CHEMICAL UNLESS AT THE SPECIFIC DIRECTION OF H-O-H PERSONNEL. 5. TRIPLE RINSE EMPTY CONTAINERS BEFORE OFFERING FOR DISPOSAL OR SALVAGE. <b>NEVER</b> REUSE EMPTY CONTAINERS.

<b>HEALTH HAZARD DATA</b>	<b>THRESHOLD LIMIT VALUE</b>	2.5 mg/m <sup>3</sup> (AIR) 15 MINUTE CEILING (NIOSH) RELATIVE TO PURE SODIUM HYDROXIDE.	<b>BWT-280</b>
<b>ACUTE HEALTH HAZARDS</b>		<b>CHRONIC HEALTH HAZARDS</b>	
<b>TISSUE BURNS</b>		<b>NONE</b>	
STRONGLY CORROSIVE TO ALL BODY TISSUES WITH WHICH IT COMES IN CONTACT.		BURNS CAN BE SLOW TO HEAL, BUT NO CHRONIC HEALTH HAZARDS ARE INVOLVED. FREQUENT EXPOSURE TO LEVELS MODERATELY IN EXCESS OF THE <b>TLV</b> MAY PRODUCE SYMPTOMS, BUT IF EXPOSURE IS ELIMINATED, SYMPTOMS SHOULD DISAPPEAR.	

<b>EFFECTS OF EXPOSURE</b>	<b>SKIN AND EYES / TARGET ORGAN</b>	<b>INHALATION / TARGET ORGAN</b>	<b>INGESTION / TARGET ORGAN</b>
	<b>BURNS</b>	<b>NON - VOLATILE / NON - DUSTING</b>	
	CAUSES HIGHLY PAINFUL INSTANTANEOUS IRRITATION OF EYES AND EYELIDS. MAY CAUSE ULCERATION OR PERFORATION OF EYES OR EYELIDS, LOSS OF EYES OR EYESIGHT.	IF PRODUCT IS DRAWN INTO THE BREATHING TRACT, SEVERE IRRITATION OF RESPIRATORY TRACT, PULMONARY EDEMA, MAY OCCUR. NASAL, MUCOUS, AND BRONCHIAL TISSUE MAY BE BURNED AND/OR PERMANENTLY DAMAGED.	CAUSES ULCERATION, BLEEDING, AND SCARRING OF THE DIGESTIVE TRACT. SHOCK, CONVULSIONS, COMA, AND DEATH MAY RESULT DEPENDING ON THE AMOUNT INGESTED.
	CAUSES ULCERATION OF SKIN WITH SLIPPERY, SOAPY FEELING. IRREPARABLE DAMAGE POSSIBLE.		COFFEE - GROUND - LIKE MATERIAL PRODUCED WITH VOMITING INDICATES DIGESTIVE BLEEDING.
<b>CONDITIONS AGGRAVATED</b>	DERMATITIS, BLISTERS, BURNS, OR ANY PRE-EXISTING SKIN IRRITATION IF CONTACT OCCURS.	IN NORMAL USE, NO EFFECT SHOULD BE NOTED SINCE NO VOLATILE COMPONENT IS PRESENT.	IN NORMAL USE, INGESTION SHOULD NOT OCCUR. INGESTION WILL PRODUCE IMMEDIATE TRAUMA.

<b>EMERGENCY PROCEDURES</b>	<b>SKIN AND EYES</b>	<b>INHALATION</b>	<b>INGESTION</b>
	<b>EYES</b>	<b>NON - VOLATILE</b>	<b>DO NOT INDUCE VOMITING</b>
	FLUSH EYES WITH WATER FOR AT LEAST 15 MINUTES HOLDING EYELIDS OPEN. GET IMMEDIATE MEDICAL ATTENTION.	IF PRODUCT IS INHALED, REMOVE SUBJECT TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. GIVE OXYGEN BY PROPERLY TRAINED PERSONNEL IF BREATHING IS DIFFICULT. KEEP SUBJECT WARM AND AT REST. OBTAIN EMERGENCY MEDICAL ATTENTION. DO NOT LEAVE PERSON UNATTENDED. ENCOURAGE NOSE BLOWING, COUGHING, AND SPITTING - OUT.	IF CONSCIOUS, DILUTE INGESTED MATERIAL WITH 2 OR MORE GLASSES OF WATER OR MILK. OBTAIN EMERGENCY MEDICAL ATTENTION. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.
	<b>SKIN</b>		INDUCED VOMITING <b>IS NOT</b> RECOMMENDED DUE TO POSSIBLE BRONCHIAL OR PULMONARY INGESTION. EMERGENCY MEDICAL ATTENTION IS REQUIRED TO REMOVE ANY INGESTED CAUSTIC AND MINIMIZE INTERNAL BURNS AND TISSUE DAMAGE.
	FLUSH WITH WATER FOR 15 MINUTES. TREAT FOR BURNS. OBTAIN MEDICAL ADVICE. REMOVE EXPOSED CLOTHING AND WASH WELL BEFORE REUSE. CONTINUE TO WASH WITH LUKE - WARM WATER UNTIL THE FEELING OF STICKINESS OR SOAPINESS DISAPPEARS, UP TO AN HOUR MAY BE NEEDED.		

<b>CARCINOGEN LISTING</b>	<b>NATIONAL TOXICOLOGY PROGRAM (NTP)</b>	<b>IARC MONOGRAPHS</b>	<b>OSHA REGULATED</b>
	NO	NO	YES (SODIUM HYDROXIDE)

<b>SPILL OR LEAK PROCEDURES</b>	<b>SPILLS AND RELEASES</b>	<b>WASTE DISPOSAL METHODS</b>
	COLLECT ANY SPILLED MATERIAL AND RETURN TO SHIPPING CONTAINER IF NOT CONTAMINATED. IF CONCENTRATED SOLUTIONS ARE SPILLED, NOTIFY THE APPROPRIATE POLLUTION CONTROL (ESDA) AUTHORITIES IF LEAKAGE ENTERS A SEWER OR IN ANY OTHER WAY IS ESCAPING FROM THE PREMISES. COLLECT SPILLED SOLUTION INTO SUITABLE CONTAINERS FOR RECLAIM OR DISPOSAL.	CONSULT FEDERAL, STATE, AND LOCAL REGULATIONS PERTAINING TO WASTE DISPOSAL.

<b>CONTROL MEASURES</b>	<b>EYE PROTECTION</b>	TIGHT - FITTING CHEMICAL GOGGLES AND FACE SHIELD.		
	<b>RESPIRATORY PROTECTION</b>	NOT REQUIRED FOR ORDINARY USE. DURING EMERGENCY CONDITIONS OR IF A SERIOUS SPILL OCCURS, AN AIR PURIFYING RESPIRATOR DESIGNED TO ABSORB ALKALINE VAPORS (AMMONIA, AMINES, ETC.) AND CHLORINE SHOULD BE USED.		
	<b>OTHER PROTECTIVE EQUIPMENT</b>	IMPERMEABLE CLOTHING. SAFETY SHOWERS AND EYEWASH FOUNTAINS SHOULD BE INSTALLED IN STORAGE AND HANDLING AREAS.		
	<b>LOCAL EXHAUST</b>	YES	<b>SPECIAL VENTILATION</b>	NOT REQUIRED FOR NORMAL USE.
	<b>MECHANICAL VENTILATION</b>	NOT REQUIRED FOR NORMAL USE.	<b>OTHER VENTILATION</b>	NOT REQUIRED FOR NORMAL USE.
	<b>PROTECTIVE GLOVES</b>	NON - SLIP ELBOW LENGTH VINYL OR RUBBER GLOVES.	<b>PROTECTIVE CLOTHING</b>	RUBBER OR VINYL APRON.

<b>REFERENCES</b>	<ol style="list-style-type: none"> <li>1. <i>Threshold Limit Values For Chemical Substances And Physical Agents In The Work Environment</i>; ACGIH, 1989.</li> <li>2. <i>OSHA Safety and Health Standards</i>: 29CFR 1900 to 1910, July 1, 1988</li> <li>3. <i>Fifth Annual Report on Carcinogens</i>; U. S. Dept. of Health and Human Services, National Toxicology Program, 1989 (Summary).</li> <li>4. M. Sittig, <i>Handbook of Toxic &amp; Hazardous Chemicals</i>, (Noyes Publications, Park Ridge, N. J., 1981).</li> <li>5. <i>Community Right - To - Know Manual</i>, (Thompson Publishing Group, Washington, D. C., 1990).</li> <li>6. <i>Right - To - Know / Chemical Manual</i> (ILLINOIS MANUFACTURES ASSOCIATION; Rooks, Pitts, and Poust, 1990).</li> <li>7. <i>Toxic and Hazardous Industrial Chemicals Safety Manual</i> (THE INTERNATIONAL TECHNICAL INFORMATION INSTITUTE, 1975).</li> <li>8. M. J. Lefevre, S. A. Conibear, <i>First Aid Manual for Chemical Accidents</i>, 2nd ed. (Van Nostrand Reinhold, New York, 1989).</li> <li>9. <i>Hazardous Materials Guide; Shipping, Materials Handling and Transportation</i> (J. J. KELLER &amp; ASSOCIATES, Inc., Neenah, Wisconsin, Dec. 1990)</li> <li>10. <i>Hazard Communication Guide; Federal &amp; State Right to Know Standards</i> (J. J. KELLER &amp; ASSOCIATES, Inc., Neenah, Wisconsin, Dec. 1990)</li> </ol>
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<b>REPORTABLE QUANTITY</b>	IF MORE THAN THE INDICATED QUANTITY IS DISCHARGED TO DRAINAGE (Sewer/surface water), AIR, OR SOIL, IMMEDIATELY REPORT AS INDICATED.		
	<b>CERCLA OR EPA</b> (Extremely Hazardous ) NATIONAL RESPONSE CENTER (800 - 424 - 8802)	STATE EMERGENCY RELEASE NOTIFICATION ILLINOIS (Only) 800 - 782 - 7860 (Consult for others )	LOCAL EMERGENCY RESPONSE AUTHORITY Record Telephone No. of Local Response Authority
<b>WRITTEN REPORT MUST FOLLOW</b>	1250 lbs. ( Sodium Hydroxide )	CONTACT	CONTACT